REMARKS / ARGUMENTS

I. Formalities and amendments to the specification and claims

The Examiner is requested to consider and initialize the references identified on the Information Disclosure Statement filed September 20, 2001 (Paper #4).

Pages 2, 4, 6, 15, 17 and 24 are amended to correct the typographical errors pointed out by the Examiner.

Trade-marks are identified at pages 15, 16, 21 and 38.

The passage at page 17 line 19 to page 18 line 23 is amended from past tense to the present tense.

Claims 1-4, 20 and 21, drawn to nucleic acids and polypeptides, are amended to recite --An isolated-- nucleic acid or polypeptide. The amendment finds basis at the paragraph beginning at page 11 line 25.

Claims 1, 4, 8, 9, 21, 22, 27 and 28 are amended to replace "fragment comprising at least 12 consecutive amino acids" with --fragment comprising at least 20 consecutive amino acids--. The amendment finds basis at page 19 lines 14-18.

Claims 8-14 are amended to be drawn to a vaccine vector rather than a vaccine comprising a vector.

Claims 18 and 19 are amended to recite the stringent conditions as described at least at page 16 lines 15-19.

Claims 1-39 are under examination. Claims 36-39 are cancelled. Applicants retain the right to present claims drawn to the cancelled subject matter in a divisional application(s). There are now 35 claims pending and under examination.

II. Rejection of the Claims Under 35 U.S.C. §101

The Examiner rejects claims 1-7, 17, 20-24, 26 and 35-39 under 35 U.S.C. §101. The claims drawn to nucleic acids and polypeptides are amended to recite --An isolated-- nucleic acid or polypeptide. With regard to claims drawn to fusion proteins, page 21 line 16 of the specification states that "a fusion polypeptide is one that contains a polypeptide or a polypeptide derivative of the invention fused at the N- or C-terminal end to any other polypeptide". Such a fusion does not occur naturally and are statutory subject matter under 35 U.S.C. §101.

III. Rejection of the Claims Under 35 U.S.C. §112 second paragraph

The Examiner rejects claims 8-14 and 16 under 35 U.S.C. §112 second paragraph, stating that "capable of being expresses" renders the claim vague and indefinite. Applicants traverse. A skilled person upon reading the specification understands that by "capable of being expressed" is meant that the nucleic acid is in an orientation and configuration required to produce the encoded polypeptide. This is a positive limitation indicating a limited number of orientation and configuration; for example, if the nucleic acid is expressed out-of-frame, the polypeptide would not be produced as required.

The Examiner rejects claims 18 and 19 under 35 U.S.C. §112 second paragraph, stating that "hybridizes under stringent conditions" renders the claim vague and indefinite. Applicants traverse. Stringent conditions are described specifically at least at page 16 lines 15-19. The claims are amended to recite the described conditions.

The Examiner rejects claim 8 under 35 U.S.C. §112 second paragraph, stating that items (ii) and (v) appear to be same. This is a typographical error and the claim is amended at item (ii) to correct the SEQ ID NO.

The Examiner rejects claims 37-39 under 35 U.S.C. §112 second paragraph. The claims are canceled, thus rendering the rejection moot.

IV. Rejection of the Claims Under 35 U.S.C. §112 first paragraph

The Examiner rejects claims 1-39 under the enablement provision of 35 U.S.C. §112 first paragraph. Applicants traverse.

(a) The claimed sequences do confer immunoprotection in the mouse model

The Examiner states that "The specification appears to be enabled for a DNA vaccine for protecting against respiratory tract infection caused by *C. pneumoniae*. However, it is not clear which DNA encoding polypeptide was used."

Applicants clarify that the passage beginning at page 17 line 19 to page 18 line 23, describing the immunization in mice and *C. pneumoniae* challenge, is a prophetic description. This is made explicit by amendment of this passage to the present tense. The description now also makes clear which DNAs are to be used.

Applicant submits that the claimed sequences do confer immunoprotection and that the invention is fully enabled. Attached is a Declaration under 37 CFR § 1.132 of inventor Andrew Murdin. The declaration describes experiments performed by the assignee, Aventis Pasteur, which demonstrate that mice immunized with a nucleic acid encoding SEQ ID NO:14 are protected from a subsequent challenge with *C. pneumoniae*. Details of the experiments performed are essentially identical to the description on page 17 line 19 to page 18 line 23.

(b) The claims do not recite protection against all Chlamydia

The Examiner states that "the specification does not enable a DNA vaccine to protect against all Chlamydia infection (i.e. infection caused by *C. trachomatis, C. psittaci, or C. pecorum*)." Applicants submit that the invention as claimed does not recite protection against all Chlamydia.

Claims 36-39 are cancelled. Applicants retain the right to present claims drawn to the cancelled subject matter in a divisional application(s).

Claims 1-35 are drawn to nucleic acids, polypeptides, and related vaccine vectors, vaccines, host cells, probes, primers, antibodies, compositions and methods of producing polypeptides. Claims 1-35 do not recite protection against all Chlamydia. Claims 1-35 are enabled and each of the claimed product and method has at least one utility; for example the claimed nucleic acids and polypeptides are useful, at least, for conferring immunogenicity against *C. pneumoniae*. There is no requirement that all utilities be disclosed.

The claims do meet the requirements of 35 U.S.C. §112 first paragraph. The Examiner is requested to withdraw the rejection.

V. Rejection of the Claims Under 35 U.S.C. § 102(b) -- Accession No. P71134

The Examiner rejects claims 21 and 27 under 35 U.S.C. 102(b) as being anticipated by Accession No. P71134. Applicants traverse.

Claims 21 and 27 now recite --fragment comprising at least 20 consecutive amino acids--. Consistent amendments are also made to claims 1, 4, 8, 9, 22 and 28. Applicants submit that the claims are novel over P71134.

VI. Rejection of the Claims Under 35 U.S.C. § 102(e) -- US patent 6,449,294 ('Griffais')

The Examiner rejects the claims of record under 35 U.S.C. 102(e) as being anticipated by Griffais. Applicants traverse.

Attached is a Declaration under 37 CFR § 1.131 of inventor Andrew Murdin. Dr. Murdin declares he had possession of the polypeptide of SEQ ID No:14 and nucleic acids encoding SEQ ID No:14 before Griffais' USC 102(e) date (November 4, 1998).

Withdrawal of the rejection under 35 U.S.C. §102(e) in view of Griffais is requested.

VII. Concluding Remarks

In view of the above amendments and remarks, reconsideration and favorable action on all pending claims are respectfully requested. If any questions or issues remain, the Examiner is invited to contact the undersigned at the telephone number set forth below so that a prompt disposition of this application can be achieved.

If a fee is required for an extension of time which is not accounted for, such an extension is requested and the U.S.P.T.O. is authorized to withdraw from our Deposit Account Number 19-0741 any fee required.

Respectfully submitted,

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